

II. EXISTING CONDITIONS

EXISTING TRANSPORTATION FEATURES

The Study Team conducted an extensive data collection effort to gain an understanding of existing conditions in the study area. In addition to collecting data for the quantitative assessment of existing conditions, the Study Team conducted field evaluations throughout the study area during peak and off-peak hours to further assist in the assessment of existing conditions. This section of the report summarizes the data collected for the study and addresses issues and deficiencies in the transportation infrastructure.

MAJOR ROADWAYS IN THE STUDY AREA

The study area is located in Southwest Washington, DC and is shown in Figure 1. The following are the major roadways in the study area:

- 3rd Street SW between Eye and M Streets SW;
- 4th Street SW between Independence Avenue and P Street SW;
- 6th Street SW between G and M Streets SW;
- 7th Street SW between Independence and Maine Avenue Avenues;
- I Street SW between 3rd and 7th Streets; and
- M Street/Maine Avenue between 3rd and 7th Streets

While most of the studied roadways continue beyond the above terminals, their associated characteristics will only be described within these limits.

3rd Street

3rd Street¹ is a two-way local street² running north-south between I Street and M Street. There is one lane in each direction, as shown in Figure 2, with parking permitted all day on both sides of the street, as shown in Figure 3. The intersections of 3rd Street with I and M Streets are signalized, while the intersections with K Street/Wesley Place and L Street are stop-controlled on the minor streets. The speed limit is 25 mph, but there are no posted speed limit signs. Both sides of the road have sidewalks.

As shown in Figure 4, land usage along 3rd Street is primarily medium-density residential, with medium-density commercial use where it borders the Waterside Mall property.

¹ All of the streets in the study area are located in the southwest quadrant of the District. Therefore, throughout this report where the SW designation is omitted, it should be understood that the street is located in the southwest quadrant of the District.

² All roadway classifications were taken from the District of Columbia Functional Classification Map, Draft, January 1, 2002.

SELECT TO VIEW:

2. *Existing (2002) Peak Period Lane Configurations*

SELECT TO VIEW:

3. *Daytime Parking Restrictions*

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4. *Generalized Land Use Map*

4th Street

4th Street is a two-way minor arterial running north-south between Independence Avenue and I Street, as well as a collector running north-south between M Street and P Street. The existing Waterside Mall occupies 4th Street right-of-way between I and M Streets. The speed limit is 25 mph, but there are no posted speed limit signs. 4th Street generally operates with one lane in each direction, although some sections of it have a second lane. Parking restrictions vary throughout the corridor – parking is generally permitted all day between E and P Streets. Between Independence Avenue and E Street, parking restrictions range from no parking at all, to off-peak parking, to all-day permitted parking. Signalized intersections along this portion of 4th Street include C, E, G, I, M, N and P Streets, as well as Independence and Virginia Avenues.

North of the Southeast-Southwest Freeway (I-395), shown in Figure 5, 4th Street is a mix of medium-high density commercial and Federal use. Between the freeway and I Street, it passes through a medium density residential neighborhood, ending at a park just south of the intersection with I Street. Waterside Mall, occupying 4th Street right-of-way between I and M Streets, is a medium density commercial use. South of M Street, 4th Street goes through another medium density residential neighborhood, before ending at Ft. McNair. Sidewalks are present on both sides of 4th Street throughout the corridor.

Figure 5
4th Street at Southwest Freeway



6th Street

6th Street is a two-way local street running north-south between G Street and M Street/Maine Avenue. It has one lane in each direction with all-day parking permitted on both sides of the street. The speed limit is 25 mph, but there are no posted speed limit signs. The intersections of 6th Street with I Street and M Street/Maine Avenue are signalized. Sidewalks are present on both sides of 6th Street throughout the corridor.

Land usage along 6th Street is primarily medium-density residential, with medium-density commercial use where it borders the Waterside Mall property.

7th Street

7th Street is a two-way minor arterial running north-south between Independence and Maine Avenues. During peak periods, it generally operates with three lanes in each direction and has no peak period parking. Parking is allowed at other times of the day. However, parking is permitted on 7th Street between G and I Streets at all times of the day, with only two lanes available to traffic. The speed limit is 25 mph, but there are no posted speed limit signs throughout the corridor. Sidewalks are present on both sides of 7th Street throughout the corridor.

North of I-395, land uses along 7th Street are primarily Federal, with some medium-high density commercial development. South of the freeway, land usage on the east side is medium density residential. The west side of 7th Street is a mix of institutional, medium density residential, a school and low density commercial.

I Street

I Street is a two-way principal arterial running east-west through the study area, between 3rd and 7th Streets. I Street operates with one lane in each direction, except at the westbound approach to 4th Street, where there are two lanes. Parking is generally permitted throughout the day on both sides of I Street, except between 3rd and 4th Streets, where there are parking restrictions. These and all other parking restrictions throughout the study area are shown in Figure 3. Sidewalks are present on both sides of I Street. The speed limit is 25 mph, but there are no posted speed limit signs.

Aside from the park along the south side of I Street between 3rd and 6th Streets, I Street is entirely medium density residential through the study area.

M Street/Maine Avenue

M Street is a minor arterial running east-west between 3rd and 6th Streets, where it becomes Maine Avenue and continues northwest-southeast to 7th Street. M Street/Maine Avenue has three through lanes in each direction and is divided by a median. Exclusive left turn lanes are provided on M/Maine in both directions at 4th and 7th Streets; for eastbound traffic at 3rd street; and for westbound traffic at 6th Street. Parking restrictions

vary throughout the corridor and can be viewed in Figure 3. The posted speed limit on M Street/Maine Avenue is 25 mph. Sidewalks are present on both sides of the street.

Land usage along M Street is primarily medium density residential, except the medium density Waterside Mall. After M Street becomes Maine Avenue, land usage is a mixture of low-density commercial and medium density residential.

PUBLIC TRANSPORTATION

The Washington Metropolitan Area Transit Authority (WMATA) provides extensive bus and rail service in the study area. As shown in Figure 6, 28 routes serve the study area, with ten serving Waterside Mall and adjacent streets. There are also private buses serving major employers in the study area. The Waterfront-SEU Metrorail station (Green Line) is located at the intersection of 4th and M Streets, directly in front of Waterside Mall. The L'Enfant Plaza (Orange, Blue, Yellow, Green Lines) and Federal Center SW (Orange, Blue Lines) Metrorail stations are also located within the study area. Bus routes operating in the immediate vicinity of Waterside Mall are as follows. Detailed timetables and route maps may be found in Appendix B.

WMATA Route A9 – South Capitol Street Line

Route A9 provides inbound service between 6:21 and 10:16 AM and outbound service between 3:17 and 6:51 PM, Monday-Friday. No service is provided at other times. AM headways at the stop located at 4th and M Streets range from 10 to 32 minutes, while PM headways range from 10 to 24 minutes.

WMATA Routes A42,46,48 – Anacostia-Congress Heights Line

Routes A42,46,48 operate on M Street/Maine Avenue and 7th Street through the study area, providing bus service 7 days a week during non-rail hours.

WMATA Routes P1,2,6 – Anacostia-Eckington Line

Routes P1,2,6 operate on I, 3rd and M Streets in the vicinity of Waterside Mall and continue through the eastern side of the study area, including Federal Center SW. Inbound, this route operates at an approximate headway of 20 minutes during the AM peak period and approximately 40 minutes during the PM peak period. There is no outbound service during the AM peak period. During the PM peak period, outbound headways are approximately 20 minutes. There is no weekend service in the vicinity of Waterside Mall.

WMATA Routes V7,8,9 – Minnesota Avenue-M Street Line

Routes V,7,8,9 operate on M, 3rd, I and 7th Streets in the vicinity of the Waterside Mall. Headways for inbound AM peak period service range from 7 to 12 minutes. Inbound PM

INSERT FIGURE 6 HERE:

6. *Public Transit*

peak period headways range from 9 to 16 minutes. Outbound headways range from 8 to 15 minutes during the AM peak period, and from 8 to 11 minutes during the PM peak period. Weekend service is offered on this route.

WMATA Routes 70,71 – Georgia Avenue-7th Street Line

In the vicinity of Waterside Mall, routes 70 and 71 operate on 7th, I, 6th, M and 4th Streets, as well as Maine Avenue. Headways during the AM peak period range from 6 to 14 minutes, while PM peak period headways range from 7 to 12 minutes. Weekend service is offered on this route.

TRAFFIC VOLUMES

In order to evaluate existing traffic conditions throughout the study area, the Study Team collected turning movement counts at eight intersections during the peak periods. Additionally, the Study Team collected daily traffic counts at key locations throughout the study area. Figure 7 shows the intersections where the Study Team collected turning movement count data:

1. 3rd and I (Eye) Streets¹
2. 4th and I (Eye) Streets
3. 6th and I (Eye) Streets
4. 7th and I (Eye) Streets
5. 7th Street and Maine Avenue
6. 6th Street and Maine Avenue/M Street
7. 4th and M Streets
8. 3rd and M Streets¹

Each of the intersections was counted during the AM and PM peak periods, 7:00-9:00 AM and 4:30-6:30 PM, respectively. Four counts were taken at each intersection during the AM and PM peak periods. Counts taken previously, during the month of February 2002 were included in the sample and were averaged with new counts taken as part of this study during the month of August 2002.

Since the majority of counts were taken during the summer months, when traffic volumes are typically lower than during other seasons, a seasonal adjustment factor of 13 percent was used to raise the summer counts to fall levels. This adjustment factor was derived from counts taken by DDOT at nearby locations during the summer and fall months. Finally, the “seasonally adjusted” counts were averaged with the February counts to create the raw volumes used for the study.

Because of the averaging process, there were minor discrepancies in the overall balance of traffic volumes throughout the study area network. In order to improve the modeling

¹ The intersections on 3rd Street were not part of the original Scope of Work, but were added later as part of a complete study of Waterside Mall.

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7. *Location of Turning Movement Counts*

of existing traffic conditions, the Study Team applied standard traffic engineering techniques to adjust the turning movement counts at intersections where minor unjustified imbalances were found. Figure 8 presents the existing (2002) balanced peak hour turning movement counts for the study area. Appendix C presents the raw volume counts for the eight intersections shown in Figure 8. Accompanying pedestrian counts are presented in Figure 9.

As shown in Figure 8, the intersections in the study area with the highest turning movement volumes can be found on M Street, with the intersection of 4th and M Streets the highest overall. The intersection of 6th and I Streets had the lowest turning movement volumes. Figure 9 shows that, as expected, the highest number of pedestrians can be found at 4th and M Streets, the intersection closest to the Metro station. Other high pedestrian volumes can be found along the predominantly residential I Street.

The Study Team collected automated Average Daily Traffic (ADT) counts over a one-week period, throughout September 2002, at the following locations:

- 3rd Street SW between L and M Streets
- 4th Street SW directly north of I Street
- 4th Street SW directly south of M Street
- 6th Street SW between K and M Streets
- 7th Street SW between G and I Streets
- M Street SW between 4th and 6th Streets

Figure 9 shows that M Street/Maine Avenue is the most heavily traveled roadway in the study area, with over 30,000 vehicles using it daily. 4th Street has the next highest volumes, with over 11,000 vehicles using the southern portion, and 7,500 using the northern section. 3rd Street has an ADT of 4,800 vehicles, which is high for a local street. Much of this 3rd Street traffic can be attributed to the lack of a direct connection on 4th Street between I and M Streets.

SPEED AND TRAVEL TIMES

In order to gain an understanding of driving patterns and to gather information needed in the development of the traffic model for the study area, the Study Team collected information on speed and travel times on the major corridors. The Study Team collected the data on travel times and delay on September 19, 2002.

Study Team data collectors drove the 4th Street, 7th Street, I Street and M Street/Maine Avenue corridors several times in each direction during both the AM and PM peak hours, and recorded the elapsed travel times at predetermined travel points and the distance between the selected travel points. For the travel time runs, the data collectors were instructed to drive at the same speed as most of the vehicles traversing the study area. Thus, in some sections of the corridors, the data collectors traveled at speeds above the speed limit.

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8. *2002 Existing Peak Hour Traffic Volumes*

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9. *Existing (2002) Peak Hour Pedestrian Counts*

The Study Team calculated average speed for each roadway segment as well as an overall average speed for the corridor using the data collected on travel times and distances between time points. Due to the numerous traffic signals along most of the corridors, as well as moderate to heavy peak period traffic volumes, overall average speeds are considerably slower than the speed limits of the roadways. However, there are individual sections on all of the corridors except I Street where average speeds met or exceeded the speed limit, as can be seen in Table 1. In particular, traffic traveling on 4th Street northbound between E and D Streets; 4th Street southbound between M and N Streets; M Street eastbound between 6th and 4th Streets; and 6th Street in both directions between I and M Streets exceeded the speed limit by several miles per hour.

As shown in Figures 10 and 11, due to signal coordination, the 4th Street corridor (north of I Street) and 7th Street corridor have higher northbound speeds in the morning, and higher southbound speeds in the afternoon. Speeds on M Street/Maine Avenue are generally consistent regardless of direction or time period, with the exception of westbound M Street between 3rd and 4th Streets, which has a considerably slower segment speed than any of the other segments. Average speeds on I Street are consistent regardless of direction, but AM speeds are higher than PM speeds. For individual segments, the approaches to 4th Street and the segment between 6th and 7th Streets are noticeably slower than all other segments.

Table 1
Average Travel Speed at Selected Segments

Roadway and Direction	Segment	Speed Limit (mph)	AM Peak	PM Peak
3 rd Street Northbound	M Street – I Street	25	24.9	23.7
3 rd Street Southbound	I Street – M Street	25	37.9	23.4
4 th Street Northbound (N)	E Street – D Street	25	38.3	21.6
4 th Street Southbound (N)	D Street – E Street	25	12.3	18.1
4 th Street Northbound (S)	N Street – M Street	25	17.5	12.3
4 th Street Southbound (S)	M Street – N Street	25	24.5	41.7
6 th Street Northbound	M Street – I Street	25	36.5	20.6
6 th Street Southbound	I Street – M Street	25	36.2	20.3
7 th Street Northbound	D Street – C Street	25	26.2	16.0
7 th Street Southbound	C Street – D Street	25	22.3	22.3
I Street Eastbound	4 th Street – 3 rd Street	25	18.9	18
I Street Westbound	3 rd Street – 4 th Street	25	9.1	5.5
M Street / Maine Avenue Eastbound	6 th Street – 4 th Street	25	29.1	16.4
M Street / Maine Avenue Westbound	4 th Street – 6 th Street	25	21.8	22.5

Appendix D presents a list of the recorded speeds for all the studied segments in the Study Area.

Due to the fact that 4th Street is not constructed between I and M Streets, traffic wishing to pass through the study area on 4th Street must go by way of I Street and M Street, and use either 3rd or 6th Street. Most vehicles choose to utilize 3rd Street rather than 6th Street. The length of this route between Independence Avenue and P Street is 1.3 miles.

SELECT TO VIEW:

10. AM Peak Period Travel Times

SELECT TO VIEW:

11. PM Peak Period Travel Times

Table 2 shows that, as expected, travel speeds are highest for northbound traffic during the AM peak period and southbound traffic during the PM peak period. Should 4th Street be connected between I and M Streets, these travel times may decrease.

Table 2
Travel Times and Speeds – Entire 4th Street Corridor¹

Direction	Peak Period	Total Time	Average Speed
Northbound	AM Peak	4:22	17.8 mph
Southbound	AM Peak	5:53	13.3 mph
Northbound	PM Peak	6:32	11.9 mph
Southbound	PM Peak	3:48	20.5 mph

SAFETY

In order to assess safety conditions in the study area, the Study Team obtained accident data from the District Department of Transportation (DDOT) for each of the five corridors, for the years 1999 through 2001. As the information summarized in Table 3 indicates, the intersection of 7th Street and Maine Avenue is the location with the largest number of accidents in the study area, with 15 during the three analyzed years. Rear end and side-swipes were the most prevalent type of accidents at this intersection. This indicates that enhancements to signing and signalization at this location may be needed to improve the safety of traffic operations. Recommendations are listed in a later section of this report.

The intersection with the next highest number of accidents between 1999 and 2001 is 3rd and M Street, with a total of 11 accidents. Ranking third was the intersection of 6th and I Streets, with 8 overall accidents and five right angle accidents.

Pedestrian accidents occurred at the intersections of 3rd and I Streets, 3rd and M Streets and 4th and I Streets. While no pedestrian accidents were reported at the intersection of 4th and M Streets, pedestrian safety issues were observed at this intersection. These issues are described in the next section of this report. Detailed accident data is presented in Appendix E.

QUEUES AT STUDIED INTERSECTIONS

The Study Team collected information on existing queues – the number of vehicles lined up at an intersection during the red phase of a traffic signal – at analyzed intersections in the study area. This information was needed to adequately develop a computerized model of existing traffic conditions. The Study Team took samples of maximum queues of each approach at the eight studied intersections. The Study Team calculated the average of the maximum queues for each of the approaches. Figure 12 summarizes the average of the observed maximum queues for the eight intersections. The longest queues

¹ 4th Street from Independence Avenue to I Street; I Street from 4th Street to 3rd Street; 3rd Street from I Street to M Street; M Street from 3rd Street to 4th Street; 4th Street from M Street to P Street.

SELECT TO VIEW:

3. *Summary of Accident Data*

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12. *Observed Queues at Studied Intersections*

were observed on westbound Maine Avenue at 7th Street during the AM and PM peak hours. Another location with long queues is northbound 4th Street at M Street.

The Study Team used the queue information to develop the traffic model. The results of the traffic simulations were compared to the observed queues. Where the Study Team found significant discrepancies between modeled conditions and observed conditions, the input data used to set up the model was examined to eliminate the possibility of errors in the development of the model. After errors were ruled out, discrepancies were reconciled by making adjustments to the traffic model parameters to make the model replicate more accurately observed traffic conditions.

EXISTING LEVELS OF SERVICE

The Consultant used SYNCHRO, a traffic modeling/analysis program, to evaluate existing traffic conditions at the eight studied intersections. For the evaluation, the Consultant entered existing traffic volumes, lane configurations, pedestrian volumes and signal timings into SYNCHRO to develop a base case, existing conditions model. SimTraffic, SYNCHRO's associated traffic simulation software, was used to assist in the development of a model that accurately replicates existing conditions.

The Consultant used the SimTraffic software results to calculate levels of service (LOS) and the delay per vehicle for the eight analyzed intersections in the study area. The LOS evaluation uses a six-letter grade scale (A to F) to rank the overall traffic handling ability of an intersection or a network. LOS A indicates excellent traffic operations with minimal delays. LOS F represents failing conditions with long delays. Levels of service E and F are generally considered undesirable. Appendix F provides a description of the different levels of service and their associated delays for both signalized and unsignalized intersections.

As Figure 13 indicates, traffic congestion is greater during the PM peak hour. For three of the eight intersections, AM and PM LOS is the same. Four of the remaining five intersections drop by one letter grade from AM to PM.

Two intersections, 4th and I Streets and 4th and M Streets are operating at LOS D during the PM peak hour. LOS D indicates that the existing traffic volumes are approaching the capacity of these two intersections and traffic delays are approaching undesirable levels during the PM peak hour.

The Consultant used the existing levels of service to identify locations where future improvements - such as signalization, changes in signal timing/phasing and additional lanes - could be implemented. These issues are described in the next section of this report.

SELECT TO VIEW:

13. Existing Levels of Service (LOS)

EXISTING TRANSPORTATION ISSUES AND RECOMMENDED IMPROVEMENTS

In addition to conducting the traffic assessments with the use of the SYNCHRO computerized transportation model and reviewing accident data, the Study Team reviewed correspondence from citizens and citizen groups, and conducted field evaluations to assess existing conditions. In addition to congested operations at the intersections currently operating at LOS D, the Study Team identified a number of issues at locations throughout the study area.

The following is a discussion of existing transportation issues and recommended improvements throughout the study area. Locations where issues were identified are shown in Figure 14¹.

3RD STREET

Issue:

1. Safety of pedestrian operations at 3rd and I Streets

Recommended Improvement:

- Replace existing crosswalks with zebra-striped crosswalks.

4TH STREET

Issue:

2. Inadequate pavement striping between Independence Avenue and I Street.

Recommended Improvement:

- Re-stripe centerline markings.

Issue:

3. Safety of traffic and pedestrian operations at 4th and C Streets

Recommended Improvement:

- Re-stripe crosswalks. Add stop bars to pavement on 4th Street.

Issue:

4. Safety of traffic and pedestrian operations at 4th Street and Virginia Avenue

Recommended Improvements:

- Add stop bar for northbound 4th Street at westbound leg of Virginia Avenue.
- Place crosswalk across 4th Street north of Virginia Avenue. Place crosswalk to connect the handicapped ramps on each side of 4th Street.
- Place stop bar for southbound 4th Street traffic 40 feet before signal heads.

Issue:

5. Safety of traffic and pedestrian operations at 4th and E Streets.

¹ The Summary of Findings and Recommendations chapter of this report includes a graphic showing the location of the recommended improvements discussed within this section.

SELECT TO VIEW:

14. Existing Transportation Issues

Recommended Improvements:

- Add stop bars on 4th Street.
- Add pedestrian signals on all four approaches.

Issue:

6. Safety of traffic and pedestrian operations at 4th and G Streets.

Recommended Improvements:

- Add stop bars on all four approaches.
- Add crosswalks on all four approaches.

Issue:

7. Safety of traffic and pedestrian operations at 4th and I Streets.

Recommended Improvements:

- Replace existing crosswalks with zebra-striped crosswalks.
- Police enforcement of right turn on red restrictions.

Issue:

8. Traffic operations at 4th and M Streets. Northbound 4th Street is operating as two left turn lanes, but is not signed or striped for it.

Discussion:

- Due to the large number of left turns at this intersection, and the split-phase operation of 4th Street/Waterside Mall driveway, this approach should be allowed to continue to operate with two left turn lanes. However, signing and striping should accompany the operation, to alert drivers to it.

Recommended Improvement:

- Place pavement marking arrow in the right lane of the northbound 4th Street approach indicating shared left/through/right operation. Install signage on the approach indicating the operation of the right lane.

Issue:

9. Traffic operations at 4th and M Streets. Traffic entering Waterside Mall tends to queue onto M Street.

Recommended Improvement:

- Reconfigure entrance to Waterside Mall and move parking gates away from M Street. This improvement would not have to be implemented if a vehicular connection is constructed on 4th Street between M and I Streets.

Issue:

10. Pedestrian operations at 4th and M Streets. Pedestrians cross on the west side of the intersection, despite the lack of crosswalk and pedestrian signal.

Recommended Improvements:

- Increase police enforcement of pedestrian laws.
- Make pedestrians aware of the crosswalk on the east side of the intersection.

Issue:

11. Safety of pedestrians crossing M Street at 4th Street. There are heavy pedestrian volumes during the peak periods.

Discussion:

- This intersection has the largest number of pedestrian crossings in the study area, as well as the highest traffic volumes. A pedestrian underpass would help improve both safety and intersection operations. However, the cost of constructing a grade-separated pedestrian tunnel across M Street at 4th Street would be high, and neighborhood residents have strong objections to this proposal based on pedestrian security and physical barriers. Therefore, a pedestrian underpass is not recommended.

Recommended Improvements:

- Increase pedestrian crossing time.
- Install “No Right Turn on Red When Pedestrians Are Present” signs on all approaches where right turns on red are permitted.

Issue:

12. Blind pedestrians crossing 4th and M Streets

Discussion:

- Audio buzzers are used at other locations around the city to assist blind pedestrians at busy intersection crossings. They should be installed at the two intersections closest to the metro station: 4th and I Streets and 4th and M Streets.

Recommended Improvement:

- Equip pedestrian signals with audio buzzers at the intersection of 4th and M Streets and at the intersection of 4th and I Streets.

6TH STREET**Issue:**

13. Safety of traffic and pedestrian operations at 6th and I Streets.

Recommended Improvements:

- Replace existing crosswalks with zebra-striped crosswalks.
- Police or camera enforcement of right turn on red restrictions.

7TH STREET**Issue:**

14. Inadequate pavement striping on 7th Street.

Recommended Improvement:

- Re-stripe crosswalks at 7th and C Streets.

Issue:

15. Traffic Operations at 7th and I Streets. Due to the skewed geometry of the legs of 7th Street, some southbound vehicles continue south on the red light, thinking they are actually making a legal right turn on red.

Recommended Improvement:

- Install “No Right Turn on Red” sign on southbound 7th Street at I Street.

Issue:

16. Missing sign at 7th and I Streets. The “No Right Turn on Red” sign for northbound 7th Street traffic is missing.

Recommended Improvement:

- Replace “No Right Turn on Red” sign on northbound 7th Street at I Street.

Issue:

17. Pedestrian and traffic operations at 7th and I Streets. Westbound right turns on red conflict with pedestrian crossings.

Recommended Improvement:

- Install “No Right Turn on Red when Pedestrians are Present” sign on westbound I Street at 7th Street.

Issue:

18. Pedestrian and traffic operations at 7th and I Streets.

Recommended Improvement:

- If the Special Traffic Operations Patrol program¹ is implemented in the District, station an officer at this intersection.

Issue:

19. One-way operation of G Street between 7th and 9th Streets.

Discussion:

- The land on the north side of G Street between 7th and 9th Streets was used as a parking lot prior to the construction of the Capitol Square residential development. Residents of this development find it difficult to access their homes due to the one-way eastbound nature of G Street. Under current conditions, they can only access their homes via 9th Street. The Study Team conducted a field evaluation of conditions on G Street and at the intersection of G and 9th Streets and found that G Street can safely and effectively be converted to two-way operation.

Currently, all traffic traveling south on 9th Street must stop at G Street, as well as traffic on the exit ramp from the Southwest Freeway. Northbound 9th Street traffic, which must turn right at G Street, is also controlled by a stop sign.

Additionally, in order to restrict westbound G Street traffic to turning left onto 9th Street, the pavement north of the island separating 9th Street from the Freeway exit ramp should be striped with 24” wide white pavement markings.

Finally, traffic signal hardware installation will be necessary at the intersection of 7th and G Streets to provide for two-way operation.

¹ This program, which is under consideration, would place special traffic operations patrol officers at select intersections in the District during peak periods to help improve traffic operations.

Recommended Improvements:

- Convert G Street to two-way operation between 7th and 9th Streets.
- An all-way stop sign should be installed at the intersection of 9th and G Streets.
- Add pavement markings to area north of island separating 9th Street and exit ramp from Southwest Freeway.
- Upgrade traffic signal at 7th and G Streets.

Issue:

20. High number of accidents at the intersection of 7th Street and Maine Avenue.

Discussion:

- DDOT accident records indicate that there were 15 accidents at this intersection between 1999 and 2001, with rear-end and side-swipe accidents the most common. Field evaluations indicate that the pavement striping is missing, in poor condition or substandard on the 7th Street approaches. Additionally, the intersection pavement is in poor condition.

Due to poor sight distance to the left, as well as the parking lane on eastbound Maine Avenue, right turns on red onto Maine Avenue from northbound 7th Street should be prohibited. Traffic volumes for this movement are light, and the recommended prohibition is not expected to have an impact on current traffic operations.

The left lane of the southbound 7th Street approach to the intersection should operate as a left turn only lane due to the high number of left turns at this approach compared to the volume of through traffic.

Recommended Improvements:

- Install “Signal Ahead” advance traffic control signs on both approaches of Maine Avenue, 150 feet before the intersection.
- Replace the “Keep Right” sign on northbound 7th Street between Water Street and Maine Avenue (the existing sign is not in good condition).
- Stripe northbound 7th Street as 3 lanes between Water Street and Maine Avenue. Due to the short length of this approach, it should be striped with solid lines the entire length. To remain consistent with existing signage, the right lane should be designated as a right turn only lane with the appropriate pavement arrow and legend.
- Prohibit right turns on red for northbound 7th Street.
- Re-stripe pavement markings on southbound 7th Street approaching Maine Avenue.
- Convert the left lane of southbound 7th Street to a left turn only lane. Add the appropriate pavement arrow and legend.
- Re-pave the intersection.

I STREET**Issue:**

21. Inadequate pavement striping on I Street.

Recommended Improvement:

- Re-stripe centerline markings from 4th Street to 7th Street.

Issue:

22. Vehicular congestion on I Street

Recommended Improvement:

- Improve coordination of traffic signals.

AREA-WIDE**Issue:**

23. Pedestrian safety around school buildings. The Consultant observed pedestrian and vehicular traffic and safety around the following schools:

- Amidon Elementary School – 401 I Street
- Jefferson Junior High School – 801 7th Street
- Techworld Public Chartered – 401 M Street
- Washington Math Science Tech – 401 M Street
- Southeastern University – 501 I Street

Recommended Improvement:

- Figure 15 presents a list of issues and potential improvements associated with the areas around each of the observed schools.

SELECT TO VIEW:

15. *Existing Schools and School Crossings*